

## **R E M A R K S / A R G U M E N T S**

Reconsideration of the above-identified application respectfully requested.

### **The Claim Amendments**

The Examiner has stated, *inter alia*, that the Office does "not see the identification of the polymer, as for instance, claim 34 with the subject matter of claims 43 or 50, and 46 or 49, and 35 or 57, in the prior art of record. Accordingly and in order to materially advance prosecution, independent claim 34 has been amended by incorporating the limitations of claims 35, 43, 46 and 50 thereinto. The polymer in claim 34 now has been defined, as requested by the Examiner in order to define over the prior art.

Additionally claim 47 has been amended in order to add moisture cure, as disclosed in the application at page 15, line 31 bridging page 16, line 16. The double inclusion of "wherein the" in claim 57 has been eliminated. Finally, the industry accepted abbreviation for "hydrogenated methylene diphenyl diisocyanate", which is "(H<sub>12</sub>MDI)", has been added to claim 49, inasmuch as various other "MDI" abbreviations are used in the specification and claims. No new matter has been added.

Entry of these claim amendments respectfully requested.

### **The Claim Rejections**

Claims 34-41, 43, and 45-62 stand rejected under the provisions of 35 U.S.C. § 103(a) as being unpatentable over Dodge (U.S. Patent No. 5,708,073) in view of Balm Paints (GB 1,288,5830) in view of Van Voris (U.S. Patent No. 5,801,194). The rejection of record was maintained. Such rejection is summarized below.

Dodge is cited as providing "the instant polyurethane systems (col. 6 lines 30-37, 49-55) able to provide protective coatings permitting slow release of pesticides, or microcapsular...." Balm Paints is cited as providing "pellets of pesticides (p. 3, lines 99-105) of polyethylene polyurethane polymers (p. 3, lines 16-35) for inclusion in film-forming coating polymers (P. 4 lines 77-95)." Finally, Van Voris is cited as teaching barriers for wood structures "incorporating insecticides (col. 5, top) as a slow release transport polymer system." Polymers are stated to be included at col. 5, ll. 66-67 and pellets at col. 9. The cited art combination, then, structured by the Examiner is that the skilled artisan desiring to utilize pesticides for timed delivery would use polyurethane coatings or pellets of Dodge incorporating insecticides/pesticides of Balm Paints, and specifically those shown in Van Voris.

Applicants respectfully traverse the art rejection of the claims and grounds therefor.

### Combination Rejection

The Examiner faults the claims as not claiming "any specific duration, pesticide and pellet polymer". With this statement Applicants take strong exception.

As an initial matter however, claim 34 calls for a polymer pellet, *to wit*:

said pellet polymer being one or more of polyethylene, polypropylene, polybutenes, natural rubber, polyisoprene, polyesters, styrene butadiene rubber, polyacrylates, polymethacrylates, polyethylene terephthalate, epoxy resins, unsaturated polyester resins, or polyurethane elastomer.

and the transport polyurethane as, *to wit*"

a transport polyurethane polymer enriched in hydrophobic elements comprising one or more of non-aromatic isocyanate segments, being enriched by predominating in urea linkages, or containing hard segments and formed from a diisocyanate and a diol chain extender of up to 12 carbon atoms that has a molecular weight of less than about 1,000, wherein said diisocyanate is one or more of toluene diisocyanate (TDI), methylene diphenyl diisocyanate (MDI), polymeric methylene diphenyl diisocyanate (PMDI), hexamethylene diisocyanate (HDI), isophorone diisocyanate (IPDI) and said diamine is one or more of 4,4'-methylene dianiline, 1,4-diaminocyclohexane, 2,4-diaminotoluene, 2,6-diaminotoluene, or 1,6-diaminohexane

It seems clear to Applicants that a specific polymer composition is claimed. Second, not just any polyurethane is claimed, but a polyurethane "enriched in hydrophobic elements comprising one or more of non-aromatic isocyanate segments, being enriched in urea linkages, or containing hard segments". The Examiner has pointed to no line of disclosure in any cited reference teaching "a transport polyurethane polymer enriched in hydrophobic elements comprising one or more of non-aromatic isocyanate segments, being enriched in urea linkages, or containing hard segments".

Next, the Examiner has not cited any patent that teaches dispersing a pesticide pellet in Applicants' "transport polyurethane polymer enriched in hydrophobic elements comprising one or more of non-aromatic isocyanate segments, being enriched in urea linkages, or containing hard segments". As pointed out in the application and prior responses by Applicants, the key to "sustained release" of a pesticide is to slow down its release. The transport polyurethane polymer is designed to do just that—slow down release of the pesticide, regardless of the precise composition of the pesticide or the pellet in which it is absorbed. The art fails to teach slowing down the pesticide release in general and certainly not how Applicants achieve such slowing down. As such, the combination of art cited fails to render obvious claim 34.

Greater detail on the transport polyurethane polymer is given in claims 43-55, 59-62. Again, the art fails to teach these compositions, as claimed.

As to specific polymer pellet compositions, dependent claims go into much greater detail as to the precise types of polymer pellets and pesticides used. For example, claim 35 shows a polymer pellet, which is "one or more of polyethylene, polypropylene, polybutenes, natural rubber, polyisoprene, polyesters, styrene butadiene rubber, polyacrylates, polymethacrylates, polyethylene terephthalate, epoxy resins, unsaturated polyester resins, or polyurethane elastomer." Claims 36 and 37 show inorganic sorbents dispersed in the pellets. Claims 38-39 show a barrier material coated onto the pellets. Claim 40 shows a size range of the pellets. It seems apparent to Applicants that the claims do in fact show specific polymer pellet compositions.

As for specific pesticides, while novelty does not rely on specific compositions, claims 57 shows pesticide compositions.

As to durations of the inventive composition, numbers are unimportant. Applicants teach the desirability of several years for their compositions. Applicants then teach how to retard or slow down the release rate of the pesticide. To do this, Applicants teach and claim specific polymer systems that transport the pesticide from within the composition to the outside world where they "do their thing." That transport composition, in claim language, is "a transport polyurethane polymer". Applicants do more by then claiming specific polyurethanes that retard the release of pesticides (any pesticide), viz., polyurethanes "enriched in hydrophobic elements comprising one or more of non-aromatic isocyanate segments, being enriched in urea linkages, or containing hard segments". The art, singly and in combination, fails to recognize the importance in retarding the release of pesticide by use of the specific transport polyurethanes Applicants claim.

Thus, contrary to the position taken by the Examiner, Applicants do in fact claim specific pesticides, pellet polymer compositions, and durations.

Conclusion

In view of the remarks submitted herewith, allowance of the claims and passage to issue of this application respectfully is requested.

Respectfully submitted,

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